



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,877	01/29/2004	Akira Egawa	392.1868	2298
21171	7590	09/29/2005		
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005				
			EXAMINER VAN ROY, TOD THOMAS	
			ART UNIT 2828	PAPER NUMBER

DATE MAILED: 09/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/765,877	<b>Applicant(s)</b> EGAWA ET AL.	
	<b>Examiner</b> <i>[Signature]</i> Tod T. Van Roy	<b>Art Unit</b> 2828	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>01/29/04, 06/18/04</u> .  | 6) <input type="checkbox"/> Other: ____.                                    |

## **DETAILED ACTION**

### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Drawings***

Figure 6 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

The disclosure is objected to because of the following informalities:

The wording of the last line on page 2 is incorrect.

The first line of page 6 is grammatically incorrect. It is believed that it would be more clearly written as: "...from the blower 6 passes through a heat exchanger 5a, for removing compression heat, and is then supplied...".

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Sequin et al. (US 4604752).

With respect to claim 1, Sequin discloses a gas laser oscillator comprising (col.1 lines 4-11, col.2 lines 3-5): an electric discharge section for generating electric discharge (fig.5) in gas laser medium (col.6 lines 24-30) for pumping the gas laser medium; a power source connected to said electric discharge section (inherent that a power source would be present for powering the electrodes, without which the device would not operate), for supplying electric discharge power thereto; and a magnetic field applying means (col.6 lines 20-23) for applying a magnetic field to said electric discharge section in a direction different from a direction of the electric discharge (fig.1, col.4 lines 16-20, col.6 lines 30-31) such that one of intensity and direction of the magnetic field is changeable (col.5-6 lines 67-2, col.7 lines 29-39, disclosing that the magnetic field may be adjusted) to thereby change a lateral mode of an laser output (the system and components of the invention are present, therefor the system would inherently function in a manner which would allow for control of the lateral mode of the laser output).

With respect to claim 2, Sequin discloses the said magnetic field applying means includes coils wound around said electric discharge section (fig.5) and direct-current coil excitation means for flowing direct current in the coils (col.5 lines 27-28) such that the intensity of the magnetic field applied to said electric discharge section is changeable by changing magnitude of the direct current (col.5-6 lines 67-2, col.7 lines 29-39, disclosing that the magnetic field may be adjusted).

With respect to claim 3, Sequin discloses the said magnetic field applying means includes coils wound around said electric discharge section (fig.7) and alternate-current coil excitation means for flowing direct current in the coils (col.6 lines 43-47) such that the intensity of the magnetic field applied to said electric discharge section is changeable by changing magnitude of the alternate current (col.5-6 lines 67-2, col.7 lines 29-39, disclosing that the magnetic field may be adjusted).

With respect to claim 4, Sequin discloses said magnetic field applying means synchronizes the magnetic field with the discharge current (col.6 lines 20-23, 35-37, wherein the magnetic field generating elements are the same elements that produce the discharge current, thus the two must be synchronous).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 2828

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sequin in view of Yamane et al. (US 5450435).

With respect to claim 5, Sequin teaches the gas laser oscillator discharge device as outlined in the objection to claim 1, but does not teach the use of multiple discharge sections. Yamane teaches a gas laser oscillator which includes multiple discharge regions (fig.1). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the gas laser oscillator discharge system of Sequin with the multiple discharge sections of Yamane to increase the volume of gas being excited and increase the output power and efficiency of the gas laser device.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Murata et al. (US 5454003) and Macken (US 4755999) both describe gas laser discharge systems that utilize electrodes producing discharge

Art Unit: 2828

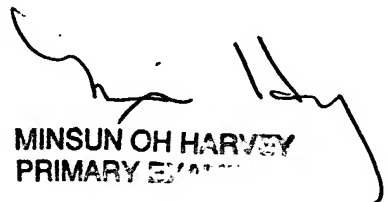
currents in the gas medium, and additionally magnetic field generating elements that produce fields in directions perpendicular to the discharge currents.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tod T. Van Roy whose telephone number is (571)272-8447. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minsun Harvey can be reached on (571)272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TVR

  
MINSUN OH HARVEY  
PRIMARY EXAMINER